

REMARKS

Applicant has carefully considered the Office Action of May 20, 2003. Applicant wishes to express his appreciation to the Examiner for the interview conducted by the undersigned, on April 8, 2003. The present response is intended to be fully responsive to all points of objection raised by the Examiner and to implement the conclusions of the interview, and it is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

The title and specification have been amended to clarify the invention and terms used in its description.

Claim 6 has been amended by incorporating the recitation of claims 9, 13, 19 and 22, and to further clarify the invention.

Claim 8 has been amended, as suggested by the Examiner. Claims 9, 13, 19 and 22 have been deleted. Claims 10-12 have been amended to be dependent on claim 6, instead of on deleted claim 9. Claims 14 and 18 have been amended to be dependent on claim 6, instead of on deleted claim 13. Therefore, claims 6-8, 10-12, 14-18, 20-21 and 23-24 remain in the case.

It is the object of the present invention to provide an aqueous pre-treatment liquid for use in preparation of an offset printing plate, for use with direct inkjet CTP. An image, recorded directly on this printing plate, by an ink jet printing apparatus, using water based ink, does not have problems of spreading and clustering. Prevention of spreading and clustering is achieved by using the proposed pre-treatment liquid.

The pre-treatment liquid comprises an ion donor and a polymer swelling reagent and/or a coalescence reagent. The pre-treatment liquid can be provided as an aqueous

and/or alcoholic solution, or an oil in water emulsion (where the oil is a non-miscible swelling reagent). The ion donor may be present as either an inorganic acid or a polyvalent metallic salt.

The pre-treatment liquid is applied to the recording surface of the printing plate. The swelling reagent and/or coalescence reagent, as well as the ion donor, are physically well localized in the porous structure of the plate's surface. The swelling and/or coalescence reagent, which diffuses within the CTP liquid, enables the creation of a stable dot shape with good film properties and with very good adhesion to the anodized aluminum surface.

These good film properties promote the mechanical stability of the dot and consequently, of the image.

Support for the amendment of claim 6, is found in the specification on page 8, lines 15 and 24-25, page 9, line 2, and page 14, lines 1-6.

Support for the amendment to the specification at page 14 is based on the specification at page 9, line 2 where it is recited "The CTP liquid solids react with the pre-treatment liquid..". It is well known that swelling reagents and/or coalescence reagents function by diffusion into the material to be treated. Therefore, it is believed that the amendment introduces no new matter.

The Examiner has rejected claims 6,7 and 9-12, 20-24 under Sec. 102(b) as being anticipated by Burns et al (US 4,560,410).

Burns describes an improved fountain solution suitable for use in a lithographic offset printing press. This fountain solution contains a mixture, of a polyol and/or glycol ether partially soluble in water and a polyol and/or glycol ether completely soluble in water. The aim is to create a fountain solution, having a

reduced evaporation rate, primarily for safety considerations. Burns does not modify plate surface properties to make them receptive to a water based liquid, as is done in the present invention.

Since all of the Examiner's objections refer to fountain solution properties and since there is no disclosure by Burns et al (US 4,560,410) of modifying plate surface properties to make them receptive to a water based liquid, it cannot be fairly said that Burns et al (US 4,560,410) anticipates the claims under Sec. 102(b).

As stated in the decision in In Re Marshall, 198 USPQ 344 (1978), "To constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art...". Since the Burns et al (US 4,560,410) reference neither 1) identically describes the invention, nor 2) enables one skilled in the art to practice it, Applicant deems the 102(b) rejection improper, and respectfully requests that it be withdrawn.

Therefore, remaining claims 6,7 and 10-12, 20-21 and 23-24 are deemed to be patentable.

The Examiner has rejected claims 6-11, 19 and 22 under Sec. 102(b) as being anticipated by Lawson et al (US 4,247,328).

Lawson discloses a concentrate, to be diluted with water to obtain a fountain solution for lithographic printing, which comprises a lithographic desensitizing material dissolved in a vehicle liquid, comprising an organic solvent liquid, optionally in admixture with water.

His aim is to create a fountain solution that would desensitize the lithographic plate, that is, to improve the plate surface oil-based ink repelling properties. Lawson does not disclose surface property improvements, that result in reduction of CTP liquid drop spreading or

clustering, as are disclosed in the present invention. In addition, Lawson requires an acid-type fountain solution, to continuously etch the plate surface on the press and during printing, thus providing a sufficient number of pores to which the fountain solution can adhere.

In contrast, the pre-treatment liquid of the present invention is deposited only once on the plate surface and fixed on it, sustaining many impressions.

Since Lawson et al (US 4,247,328) does not disclose modifying surface properties, to cause a reduction of CTP liquid drop spreading or clustering, and does not disclose a pre-treatment liquid deposited only once on the plate surface and fixed on it, sustaining many impressions, as are disclosed in the present invention, it cannot be fairly said that Lawson et al (US 4,247,328) anticipates the claims under Sec. 102(b).

Therefore, remaining claims 6-8 and 10-11 are deemed to be patentable.

The Examiner has rejected claims 6-21, 23 and 24 under Sec. 102(b) as being anticipated by Jolliffe et al (US 6,182,571).

The present invention provides an offset printing plate for direct inkjet CTP, whereas the Jolliffe patent does not. In addition, his aim is to create a hydrophilic layer on a support, by contacting the support with a silicate solution and then applying a modifying means over the hydrophilic layer to modify interaction between the hydrophilic layer and an image layer provided over the hydrophilic layer. Jolliffe requires a hydrophilic layer in order for his method to work.

In contrast, the present invention does not augment hydrophilicity, as that property results in dispersion of the water-based ink. The present application ensures reaction between the CTP liquid solids and the pre-

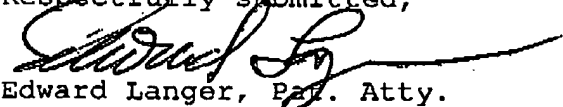
treatment liquid, thereby providing chemical binding interactions above and in the pores of the recording plate surface itself, and thus provides mechanically stable ink dots.

Since there is no disclosure by Jolliffe et al (US 6,182,571) of reaction between the CTP liquid solids and the pre-treatment liquid, thereby providing chemical binding interactions above and in the pores of the recording plate surface itself, and thus providing mechanically stable ink dots, as are disclosed in the present application, it cannot be fairly said that Jolliffe et al (US 6,182,571) anticipates the claims under Sec. 102(b).

Therefore, remaining claims 6-8, 10-12, 14-18, 20-21 and 23-24 are deemed to be patentable.

In view of the foregoing remarks, all of the claims in the application are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,


Edward Langer, Pat. Atty.
Attorney for Applicant
Reg. No. 30, 564

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